IN THE CLAIMS

The following is a complete listing of the claims with a status identifier in parenthesis.

Listing of Claims

1. (Original) An asynchronous transfer mode network comprising: a plurality of remote terminals remotely disposed relative to a central office, the remote terminals being connected by a ring with two paths which transfers signals thereon in opposite directions relative to each path, the central office for feeding duplicate signals on each path; each remote terminal including:

a first multiplexer for routing signals transferred on the ring to and from an asynchronous feeder multiplexer; and

the asynchronous feeder multiplexer adapted to route components of downstream signals on a first path of the ring to a destination and to replace the components of the signals on the first path with copies of components of signals running in an opposite direction on a second path of the ring such that at any location in the network both paths provide all signals.

2. (Original) The network as recited in claim 1, wherein the asynchronous feeder multiplexer includes protection logic adapted to compare signals received from the opposite directions on the two paths to select a signal to be output.

3. (Original) The network as recited in claim 2, wherein the protection logic selects for the output that signal which remains after a loss of signal has been detected.

4. (Original) The network as recited in claim 2, wherein the protection logic selects, for the output signal, a signal having a best signal quality.

5. (Original) The network as recited in claim 2, wherein the signals received from opposite directions include components and the protection logic selectively chooses components of each output signal based on the components having a best signal quality.

6. (Original) The network as recited in claim 1, wherein the network includes a synchronous optical network (SONET).

7. (Original) The network as recited in claim 6, wherein the network employs at least an STS-1 optical bandwidth.

8. (Original) The network as recited in claim 1, wherein the network includes metallic channels in the two paths of the ring.

9. (Original) The network as recited in claim 8, wherein the network employs DS3 bandwidth.

10. (Original) An asynchronous transfer mode network comprising:

a first path for connecting a plurality of remote terminal sites and for transferring asynchronous transfer mode signals in a first direction;

a second path for connecting the plurality of remote terminal sites and for transferring asynchronous transfer mode signals in a second direction opposite the first direction;

a central office coupled to the first and second paths for feeding duplicate asynchronous transfer mode signals downstream from the central office to the remote terminal sites and for receiving upstream asynchronous transfer mode cells from the remote terminal sites to compare upstream signals and to select a best available upstream signal;

the remote terminal sites including:

a first multiplexer for routing signals transferred on the first and second paths to and from an asynchronous feeder multiplexer; and

the asynchronous feeder multiplexer adapted to route components of downstream signals on the path to a destination and to replace the components of the signals on the first path with copies of components of signals running in an opposite direction on the second path such that at any location in the network both paths provide all signals.

11. (Original) The network as recited in claim 10, wherein the central office includes an asynchronous feeder multiplexer including protection logic adapted to compare signals received from opposite directions on the first and second paths to select the best available upstream signal.

12. (Original) The network as recited in claim 11, wherein the protection logic selects the best available upstream signal by selecting a signal which remains after a loss of signal has been detected.

13. (Original) The network as recited in claim 11, wherein the protection logic selects the best available upstream signal by selecting a signal having a best signal quality.

14. (Original) The network as recited in claim 11, wherein the signals received from opposite directions include components, and the protection logic selectively merges components of each of the signals received from opposite directions based on a condition of best signal quality.

15. (Original) The network as recited in claim 10, wherein the network includes a synchronous optical network (SONET).

16. (Original) The network as recited in claim 15, wherein the network employs at least an STS-1 optical bandwidth.

17. (Original) The network as recited in claim 10, wherein the network includes metallic channels in the first and second paths.

18. (Original) The network as recited in claim 17, wherein the network employs DS3 bandwidth.

19. (Original) A method for providing add/drop capability and link protection in an asynchronous network comprising the steps of:

providing an asynchronous transfer mode network having a plurality of remote terminals remotely disposed relative to a central office, the remote terminals being connected by a ring including two paths which transfer signals thereon in opposite directions relative to each path;

feeding duplicate signals downstream on each path from the central office;

routing signals transferred on the two paths to and from an asynchronous feeder multiplexer at each remote terminal;

routing components of downstream signals on a first path of the ring to a destination; and

replacing the components of the signals on the first path of the ring with copies of components of signals running in an opposite direction on a second path of the ring such that at any location in the network both paths provide all signals.

20. (Original) The method as recited in claim 19, further comprising the step of comparing signals received by the central office from opposite directions on the two paths to select an output signal.

21. (Original) The method as recited in claim 20, wherein the step of comparing signals includes the step of selecting the output signal which remains after a loss of signal has been detected.

22. (Original) The method as recited in claim 20, wherein the step of comparing signals includes the step of selecting the output signal which includes a best signal quality.

23. (Original) The method as recited in claim 20, wherein the step of comparing signals includes the step of merging components of each signal based on the components including a best signal quality.

24. (New) The network as recited in claim 1, wherein the components of the downstream signals are at a location within a cell and the copies of components of the signals running in the opposite direction are used to replace the components of downstream signals at the location within the cell.

25. (New) The network as recited in claim 10, wherein the components of the downstream signals are at a location within a cell and the copies of components of the signals running in the opposite direction are used to replace the components of downstream signals at the location within the cell.

26. (New) The method of claim 20, wherein the components of the signals are at a location within a cell and the copies of components of the signals running in the opposite direction are used to replace the portion of components of the signals on the first path at the location within the cell.